

*Notes on the TRICHOPTERYGIA found in America by the late
G. R. Crotch, Esq., with descriptions of the new species.*

By the Rev. A. MATTHEWS, M.A.

While my lamented friend, Mr. Crotch, was so actively and so successfully engaged in collecting insects in America, he did not forget the friends whom he had left behind. The sight of a Trichopteryx would no doubt recall to his mind the many hours of interesting study we had spent in each others company, and many an anxious search through the pages of antiquated Entomological works made with unwearied patience for my special benefit. Thus it happened that whatever part of the world might chance to be the scene of his explorations, the Trichopterygia were ever in his mind, and the number of these atoms which he possessed at the time of his death proves with what zeal they had been collected. Dr. Le Conte, in whose hands the collections of Mr. Crotch were placed, has with great care grouped the various species and transmitted a large selection of them to me; by his kind permission, I am now able to publish the result of my examination. These collections did not, however, comprise the whole of Mr. Crotch's discoveries in the Trichopterygia; he had not been very long in America before he sent to me a few species which he had found in the Eastern States, though I regret to add that the package did not reach me when he was alive. In this lot, among many of the forms usual in that region, there were two very interesting new species; of these one was a *Trichopteryx*, presenting the very peculiar form of *T. variolosa* but much smaller, and of an intensely deep black colour with a shining and almost impunctate surface; the other was a very small species of *Nossidium*. Both these have been already described in "Cistula Entomologica," vol. I. p. 298, under the names of *T. marenz* and *Nossidium posthumum*.

The labours of Mr. Crotch were latterly confined to the Western side of the Continent, and more especially to the parts bordering on the Pacific Coast, on this account the species which he met with differ much from those which inhabit the Eastern or Atlantic States. Species such as *T. Haldemanni* or *T. aspera*, abundant in the Eastern States, seem to be entirely absent from those on the other side, where their places are supplied by forms of a different and more European type. Some genera, as *Ptenidium* and *Ptinella*, are wholly unrepresented in Mr. Crotch's collections; this is the more surprising as Mr. Crotch was a most expert and successful collector of *Ptinellæ*. With his previous knowledge, therefore, of their habits it is not probable that he would have overlooked situations in which they were likely to occur. Again, genera rarely met with in other parts of the world, appear more abundant in this region. Of the nineteen species which I have examined two belong to the scarce genus *Actidium*, and three to *Ptilium*, a form almost exclusively European.

It must always happen when a collection of *Trichopterygia* arrives from any fresh locality, that a large number of the species will prove to be distinct from any previously described; indeed, I believe the genus *Trichopteryx* alone to be one of the most extensive in the whole of the Coleoptera. Nevertheless, Col. Motschulsky met with much unmerited vituperation, for, as his critics are pleased to term it, making so many new species, and I shall probably be considered guilty of the same crime. But it will be found impossible to describe or conscientiously distinguish animals belonging to this group on any other plan; individuals, which when examined by an ordinary lens appear sufficiently similar to belong to the same species, will, if placed under a compound power high enough to exhibit their superficial sculpture, be found to bear the same affinity to each other as *Carabus monilis* bears to its congener *C. nemoralis*.

In distinguishing the species of *Trichopterygia* the superficial sculpture, especially of the thorax, is a most important diagnostic; so much so that the difference between allied species may be more easily recognized by this than any other means, and individuals grouped according to sculpture will generally be

found to agree in every other character. It sometimes, but very rarely, happens that similar sculpture exists in totally dissimilar species, but in all these cases the size, form, or the length of limbs contradicts the possibility of their identity. Among the species described in the following pages, *T. vicina* and *T. cognata* respectively approach the European *T. picicornis* and *T. fascicularis*, but after the most careful comparison, I feel convinced that they cannot be associated with those species.

The most interesting among the captures of Mr. Crotch, are *Hydroscapha natans*, and *Motschulskium sinuatocolle*, of these the former is one of those synthetic forms whose true position it is so difficult to determine, and the latter a remarkable insect previously known only by a much mutilated and unique example in the collection of Dr. Le Conte.

List of *Trichopterygia* found by Mr. Crotch in America.

The species marked W, were found on the Western side, those marked E, on the Eastern side of the Continent.

<i>Hydroscapha natans</i> , Le Conte.	W.	
<i>Nossidium posthumum</i> , Matth.	E.	
<i>Motschulskium sinuatocolle</i> , Matth.	W.	
<i>Actidium Crotchianum</i> , n. sp.	W.	
„ <i>politum</i> , n. sp.	W.	
<i>Ptilium Columbianum</i> , n. sp.	W.	
„ <i>humile</i> , n. sp.	W.	
„ <i>obscurum</i> , n. sp.	W.	
<i>Nephane læviusculus</i> , Matth.	E.	
<i>Trichopteryx mærens</i> , Matth.	E.	allied to <i>T. variolosa</i> .
„ <i>aspera</i> , Hald.	E.	
„ <i>parallela</i> , Motsch.	W.	
„ <i>vicina</i> , n. sp.	W.	allied to <i>T. picicornis</i> .
„ <i>castanea</i> , n. sp.	W.	„ <i>T. Edithia</i> .
„ <i>Californica</i> , n. sp.	W.	„ <i>T. Lethierryi</i> .
„ <i>xanthocera</i> , n. sp.	W.	„ <i>T. Hornii</i> .
„ <i>parallelopipeda</i> , n. sp.	W.	„ <i>T. Hornii</i> .
„ <i>diffinis</i> , Motsch.	W.	
„ <i>cognata</i> , n. sp.	W.	„ <i>T. fascicularis</i> .

- Trichopteryx abrupta, Hald. W.
 „ Henrici, Matth. W.
 „ Sitkaensis, Motsch. W.
 „ Crotchii, Matth. W.
 Actinopteryx fucicola, Allib. E.

Actidium Crotchianum, n. sp.

L.c. $\frac{5}{16}$ l. = 0.062 m. Ovale valde convexum nigrum haud nitidum, pilis brevissimis albidis vestitum; capite magno oculis modicis prominulis; pronoto brevi transverso, capite haud longiori parum latiori, sat nitido, profundius et confertissime punctato, fere tuberculato, depressione magnâ transversâ prope basim notato, margine basali fere rectâ; elytris ovatis fere ad media latissimis, ordinibus rectis confertissime asperatis, apicibus rotundatis; pedibus atque antennis sat longis nigris.

Caput sat magnum, antice productum, valde convexum, confertim tuberculatum, sat nitidum. Oculi modici prominuli. Antennæ sat longæ piceo-nigræ articulo nono vix incrassato.

Pronotum breve transversum, capite vix longius parum latius, sat nitidum, confertissime tuberculatum, depressione transversâ ad basim notatum, lateribus rotundatis, angulis posticis rotundatis, margine basali fere rectâ humeris elytrorum incumbenti.

Scutellum modicum triangulare confertim asperatum.

Elytra ovata valde convexa, sat inflata, ad media latissima, capite atque pronoto plus quam sesqui longiora, parum latiora, ordinibus transversis leviter sed confertissime asperata, apicibus attenuatis et rotundatis, aliquantum dilutioribus.

Pedes sat longi graciles piceo-nigri.

Subtus totum piceum.

Differt ab *Act. Boudierii*, cui affine est, staturâ majori, formâ latiori inflatâ, sculpturâ leviori, atque antennis crassioribus.

Habitat Americam septentrionalem in Columbiâ Britannicâ a D^o Crotch lectum.

Actidium politum, n. sp.

L.c. $\frac{4}{16}$ l. = 0.050 m. Ovale convexum nigrum nitidissimum, pilis brevissimis sparsissime indutum; capite sat magno; pronoto brevi sat parvo, capite vix latiori, nitidissimo punctis remotis

valde indistinctis notato, postice latissimo, lateribus leviter rotundatis, margine basali valde rotundatâ; elytris ovalibus ante media latissimis nitidissimis, ordinibus distinctis siuatis levissime asperatis, apicibus valde rotundatis; pedibus atque antennis piceo-nigris.

Caput magnum antice longius productum et valde rotundatum nitidissimum, punctis valde indistinctis atque foveâ indistinctâ ad frontem utrinque impressum. Oculi sat parvi prominuli. Antennæ articulis basalibus piceis *reliquis* exemplo viso *effractis*.

Pronotum breve sat parvum, capite haud longius parum latius, nitidissimum, punctis remotis valde indistinctis notatum, ad basim latissimum lateribus leviter rotundatis et leviter marginatis, basi valde rotundatâ humeris elytrorum incumbenti.

Scutellum modicum triangulare punctis sat magnis impressum.

Elytra ovalia capite atque pronoto parum longiora et latiora, ante media latissima, nitidissima, ordinibus distinctis sinuatis levissime asperata, striatim punctata, apicibus latis valde rotundatis sat dilutioribus, suturâ postice elevatâ.

Pedes sat longi nigro-picei.

Subtus piceum ore atque metasterno dilutioribus.

Differt staturâ minutâ, superficie glabrâ nitidissimâ et sculpturâ.

Habitat Americam septentrionalem in Californiâ apud San Diego a D^o Crotch lectum.

Ptilium Columbianum, n. sp.

L.c. $\frac{7}{16}$ l. = 0.087 m. Elongato-ovale convexum ferrugineum vel castaneum pilis flavescentibus sat dense vestitum, capite magno oculis magnis prominentibus; pronoto modico, capite parum latiori, tuberculis distinctis sat irregulariter dispositis interstitiisque nitidis vix reticulatis ornato, margine basali rotundatâ parum reflexâ nitidâ; elytris longis, capite atque pronoto fere duplo longioribus, sat profunde asperatis, apicibus parum rotundatis, pedibus atque antennis longis gracilibus læte flavis.

Caput modicum antice triangulariter-elongatum, tuberculis ordinibus transversis dispositis ornatum. Oculi magni prominentes. Antennæ prælongæ graciles læte flavæ. Palpi maxillares magni flavi.

Pronotum sat parvum; capite parum brevius et latius, convexum, fere ad basim latissimum lateribus valde rotundatis et marginatis, tuberculis sat magnis distinctis sat irregulariter dispositis, interstitiisque nitidis vix reticulatis ornatum, margine basali rotundatâ leviter reflexâ nitidâ angulis rotundatis.

Scutellum modicum triangulare elongato-acuminatum confertum et profunde asperatum.

Elytra longa elongato-ovalia, capite atque pronoto fere duplo longiora pone media latissima lateribus leviter marginatis ordinibus distinctis fortiter sinuatis asperata, apicibus latis parum rotundatis.

Abdomen pygidio solo exserto.

Pedes longi læte flavi.

Subtus totum testaceum.

Differt a Pt. Spencei staturâ magnâ, formâ pronoti, atque antennis prælongis; a *Pt. Sharpi* pronoto majori et latiori fere ad basim latissimo, atque sculpturâ multo leviori.

Habitat Americam septentrionalem in Columbiâ Britannicâ atque in Californiâ a D^o Crotch frequenter lecta.

Obs.—Exemplis nonnullis hujusce speciei elytra aliis multo latiora sunt sed utpote *Ptilium Spencei* modo eodem variat, distinctionem tantum sexualem haberi censeo.

Ptilium humile, n. sp.

L.c. $\frac{5}{16}$ l. = 0.062—0.075 m. Elongatum modice convexum ferrugineum pilis flavis sat dense vestitum, capite sat magno oculis magnis prominulis; pronoto parvo, capite breviori vix latiori, tuberculis sat magnis confertissime ornato, lateribus rotundatis, margine basali leviter sinuatâ nitidâ reflexâ angulis obtusis, elytris elongato-ovalibus, ordinibus sinuatis sat remotis modice asperatis; apicibus ovalibus; pedibus atque antennis læte flavis.

Caput sat magnum antice elongatum tuberculis parvis confertissime obtectum. Oculi magni prominuli nigrescentes. Antennæ breves sat robustæ læte flavæ.

Pronotum parvum breve, capite brevius vix latius fere ad medium latissimum lateribus valde rotundatis fortiter marginatis

atque setis duabus brevibus pone media instructis, tuberculis sat magnis confertissime obtectum, margine basali leviter sinuatâ reflexâ nitidâ angulis obtusis.

Scutellum modicum triangulare elongato-acuminatum confertim asperatim.

Elytra elongato-ovalia, capite atque pronoto plusquam duplo longiora vix latiora, ad media latissima, ordinibus sinuatis sat remotis modice asperata, apicibus ovalibus angulis suturalibus fere rectis.

Abdomen pygidio solo exserto.

Pedes breves robusti læte flavi.

Subtus totum ferrugineum.

Differt a Pt. Columbiano staturâ multo minori, formâ angustiori, antennis brevibus robustis, et sculpturâ pronoti.

Habitat Americam septentrionalem rarum in Californiâ apud San Diego a D^o Crotch lectum.

Ptilium obscurum, n. sp.

L.c. $\frac{1}{16}$ l. = 0.075 m. Ovale convexum piceum pilis sat longis densius vestitum, capite magno obtuso oculis haud prominentibus; pronoto modico, capite longiori et latiori, tuberculis magnis ordinibus fortiter sinuatis dispositis interstitiisque nitidis leviter reticulatis ornato, lateribus leviter rotundatis, margine basali leviter rotundatâ angulis obtusis; elytris sat brevibus ad apices latissimis, ordinibus sinuatis profunde asperatis; pedibus atque antennis flavis.

Caput magnum antice obtusum, tuberculis parvis ordinibus rectis dispositis interstitiisque nitidissimis leviter reticulatis ornatum. Oculi sat magni haud prominentes. Antennæ modicæ flavæ articulo secundo incrassato.

Pronotum magnum convexum, capite longius et latius, ad basin latissimum lateribus leviter rotundatis, tuberculis magnis ordinibus fortiter sinuatis dispositis interstitiisque nitidissimis leviter reticulatis ornatum, margine basali leviter rotundatâ angulis obtusis.

Scutellum breve triangulare haud acuminatum modice asperatum.

Elytra sat brevia, capite atque pronoto haud longiora vix latiora, ad humeros pronoto angustiora, ordinibus sinuatis profunde asperata, apicibus validissime rotundatis late dilutioribus.

Abdomen pygidio solo exserto.

Pedes modici late flavi.

Subtus piceo-castaneum ore coxis apice metasterni atque segmentis ultimis ventris flavis.

Differt a *Pt. Columbiano* staturâ minori, formâ latiori, capite et pronoto majoribus, elytris latioribus et multo brevioribus, scutello breviori obtuso, et colore piceo.

Habitat Americam septentrionalem in Columbiâ Britannicâ in fungo quodam a D^o Crotch lectum.

Trichopteryx vicina, n. sp.

L.c. $\frac{1}{16}$ l. = 0.075 m. Oblonga parum convexa nigerrima pilis brevibus flavis parce vestita; capite permagno lato oculis vix prominentibus; pronoto magno convexo ad basim latissimo, tuberculis parvis indistinctis ordinibus remotis sinuatis dispositis, interstitiisque nitidissimis profunde reticulatis ornatu, angulis posterioribus latis longe productis; elytris fere quadratis lateribus parallelis, pronoto parum angustioribus, ordinibus remotis sinuatis modice asperatis, apicibus latis minime rotundatis; pedibus late flavis; antennis nigris.

Caput permagnum latum nitidissimum, tuberculis indistinctis ornatum. Oculi magni haud prominentes. Antennæ modicæ nigrae.

Pronotum magnum convexum, capite longius et latius, ad basim latissimum lateribus leviter rotundatis, late marginatis margine dilutiori, tuberculis parvis ordinibus remotis sinuatis dispositis, interstitiisque nitidissimis profunde reticulatis ornatum, margine posteriori fere rectâ angulis latis productis dilutioribus.

Scutellum magnum triangulare confertim asperatum.

Elytra brevia quadrata lateribus parallelis, capite atque pronoto haud longiora, parum angustiora, ordinibus remotis sinuatis modice asperata, interstitiis reticulatis, suturâ postice elevatâ, apicibus vix rotundatis anguste dilutioribus.

Abdomen parum exsertum segmento apicali tridentato.

Subtus nigra ore atque coxis dilutioribus.

Differt a T. picicorni staturâ majori, sculpturâ pronoti multo leviori atque diversâ, antennisque longioribus; alioque valde consimilis.

Habitat Americam septentrionalem in Columbiâ Britannicâ a D^o Crotch lecta.

Trichopteryx castanea, n. sp.

L.c. $\frac{7}{16}$ l. = 0.087 m. Oblonga convexa rufocastanea sat nitida pilis aureis dense vestita; capite modico oculis haud prominentibus; pronoto modico ante basim latissimo angulis longe productis, tuberculis parvis ordinibus sinuatis regulariter dispositis, interstitiisque nitidis profunde reticulatis ornato; elytris oblongis lateribus fere parallelis, ordinibus sinuatis irregulariter asperatis, interstitiis reticulatis, apicibus latis rotundatis; abdomine sat longius exserto; pedibus atque antennis pallide flavis.

Caput modicum antice productum tuberculis minutis interstitiis reticulatis ornatum. Oculi sat magni haud prominentes. Antennæ longæ crassiores, articulis duobus basalibus permagnis, læte flavæ.

Pronotum modicum capite longius et latius, ante basim latissimum lateribus rotundatis et marginatis, tuberculis parvis ordinibus sinuatis dispositis, interstitiisque nitidis profunde reticulatis ornatum, margine basali depressâ sinuatâ angulis acutis longe productis læte flavis.

Scutellum magnum triangulare elongatum confertim asperatum.

Elytra oblonga convexa translucida, lateribus marginatis fere parallelis, capite atque pronoto longiora haud latiora, ordinibus sinuatis sat profunde asperata interstitiis reticulatis, apicibus latis rotundatis.

Abdomen sat longius exsertum obtusum segmento apicali minute bidentato.

Pedes robusti læte flavi.

Subtus castanea ore coxis margine posteriori metasterni atque apice ventris flavescens.

Differt a T. Edithia staturâ majori, formâ parallelâ pedibus atque antennis crassioribus, atque pronoto ad basim latissimo.

Habitat Americam septentrionalem in Columbiâ Britannicâ a D^o Crotch lecta.

Trichopteryx Californica, n. sp.

L.c. $\frac{7-8}{16}$ l. = 0.087—0.100. Oblonga sat convexa castanea nitida, pilis brevibus aureis vestita; capite magno lato, oculis modicis haud prominentibus; pronoto magno lato angulis posterioribus valde productis, tuberculis minutis ordinibus irregularibus dispositis, interstitiisque nitidis profunde reticulatis ornato; elytris oblongis lateribus fere rectis, ordinibus sinuatis confertim sat leviter asperatis; abdomine sat exserto; pedibus atque antennis læte flavis.

Caput magnum latum nitidum, tuberculis minutis interstitiisque nitidis ornatum. Oculi modici haud prominentes. Antennæ longæ sat graciles læte flavæ.

Pronotum magnum convexum, capite paulum longius multum latius, ad basim latissimum lateribus rotundatis et marginatis, picco-castaneum angulis late atque lateribus flavescentibus, tuberculis minutis ordinibus irregularibus dispositis, interstitiisque nitidis confertim reticulatis ornatum, margine posteriori fortiter sinuatâ angulis acutissimis longe productis.

Scutellum magnum triangulare confertim asperatum.

Elytra oblonga rufo-castanea suturâ dilutiori, capite atque pronoto aliquantum et longiora et angustiora lateribus rectis fere parallelis, ordinibus sinuatis confertim asperata interstitiis nitidis, apicibus latis parum rotundatis, suturâ postice elevatâ.

Abdomen sat exsertum obtusum segmento apicali tridentato.

Pedes modici sat graciles læte flavi.

Subtus picea ore coxis et margine posticâ metasterni flavis, metasterno profunde reticulato.

Differt a *T. Lethierryi*, cui affinis est, staturâ multo minori, elytris longioribus, pedibus brevioribus, sculpturâ leviori et pube brevissimâ.

Habitat Americam septentrionalem apud Lacum Tahoe in Californiâ a D^o Crotch lecta.

Trichopteryx xanthocera, n. sp.

L.c. $\frac{1-8}{16}$ l. = 0.100 m. Oblonga sat lata convexa, picco-nigra elytris rufescentioribus, pilis modicis pallidis vestita, capite magno oculis haud prominentibus; pronoto magno convexo postice dilatato, tuberculis minutis irregulariter dispositis inter-

stitiisque nitidis reticulatis ornato, angulis posticis longe productis flavis: elytris quadratis haud attenuatis, ordinibus distinctis sinuatis asperatis, suturâ rufescenti, apicibus latis parum rotundatis; abdomine parum exserto; pedibus atque antennis latissime flavis.

Caput magnum latum nitidum, tuberculis exiguis interstitiisque glabris ornatum. Oculi modici haud prominentes. Antennae longiores sat graciles latissime flavae.

Pronotum magnum convexum postice dilatatum capite longius et multo latius, ad basim latissimum, tuberculis minutis ordinibus transversis fere rectis dispositis, interstitiisque nitidis indistincte reticulatis ornatum, lateribus parum rotundatis flavo-marginatis, margine posteriori depressâ sinuatâ angulis longe productis flavescentibus.

Scutellum magnum triangulare confertim asperatum.

Elytra quadrata brevia, capite atque pronoto haud longiora aut latiora, ordinibus distinctis sinuatis sat profunde asperata, lateribus fere rectis, suturâ rufescenti, apicibus latis parum rotundatis dilutioribus.

Abdomen sat exsertum obtusum rufo-piceum segmento apicali minute tridentato.

Pedes sat robusti late flavi.

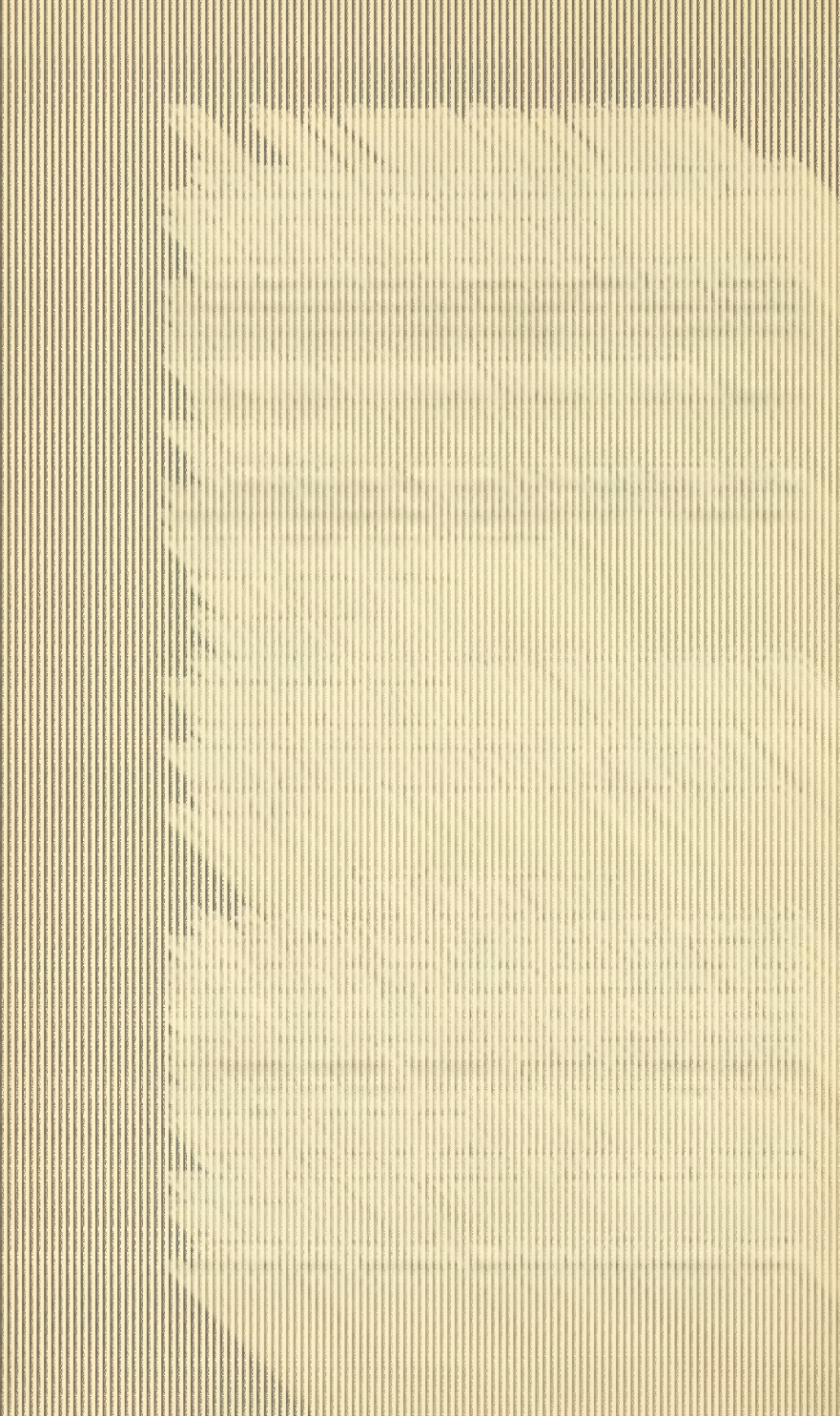
Subtus toto rufo-picea metasterno obscurato.

Differt a T. Hornii staturâ majori, formâ quadratâ et latiori; elytris rufo-piceis, sculpturâ leviori atque antennis late flavis.

Habitat Americam septentrionalem in Columbiâ Britannicâ a D^o Crotch lecta.

Trichopteryx parallelopipeda, n. sp.

L.c. $\frac{8}{16}$ l. = 0.100 m. Oblonga convexa sat nitida nigra pilis, sat longis flavis vestita, capite modico oculis haud prominentibus; pronoto modico valde convexo, ad basim latissimo angulis posticis longius productis, tuberculis modicis ordinibus irregularibus confertim dispositis interstitiisque nitidis profunde reticulatis ornato, elytris oblongis haud attenuatis, ordinibus sinuatis asperatis, interstitiis profunde reticulatis; antennis sat brevibus picconigris, articulo octavo parvo; pedibus late flavis.



culis minutis ordinibus irregularibus confertim dispositis, interstitiisque dense reticulatis ornatum, margine basali depressâ leviter trisinuatâ angulis longe productis extremis dilutioribus.

Scutellum magnum triangulare acuminatum, confertim asperatum.

Elytra oblonga attenuata, capite atque pronoto nec longiora nec latiora lateribus leviter rotundatis, ordinibus densis leviter sinuatis confertim asperata, apicibus attenuatis valde rotundatis dilutioribus extremis albidis.

Abdomen longe exsertum obtusum segmento apicali minute tridentato.

Pedes robusti femoribus infuscatis tibiis late flavis.

Subtus nigra ore brunneo, metasterno profunde reticulato.

Differt a T. fasciculari staturâ minori, formâ angustiori, capite atque pronoto minoribus, atque antennis piceis.

Habitat Americam septentrionalem in Columbiâ Britannicâ a D^o Crotch lecta, exemplo unico viso.